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Everyday green space and experienced well-being: the significance of wildlife encounters

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ABSTRACT

A broad and growing evidence base suggests the potential for time spent in natural environments to promote human health and well-being. Whilst evidence of such benefits is rapidly accumulating, we still know relatively little about the role of wildlife encounters in shaping the well-being potential of people's routine green/blue space interactions, particularly amongst non-specialists. This article addresses this conceptual gap, drawing on the findings of a three-stage, qualitative, interpretive study which sought to understand and situate people's natural environment well-being experiences within their everyday lives. Wildlife encounters were emphasised by study participants in the context of four types of well-being experience: social, immersive, symbolic and achievement oriented. These are explored within this paper, before discussing the influence of past experiences and current life circumstances on participants' wildlife relationships. Consideration is also given to how environmental managers might focus activity and investment to balance opportunities for such wildlife experiences with the ongoing priorities of delivering socially inclusive, ecologically rich and climate change-resilient green spaces.

KEYWORDS

Green space design; wildlife; well-being; geo-narratives; south-west England

Introduction

A growing number of studies have identified positive links between the availability of relatively 'natural' spaces (such as parks, gardens and woodlands) in the living environment and varied human health and well-being outcomes (Hartig, Mitchell, De Vries, & Frumkin, 2014). Mixed evidence of these benefits is accumulating within multiple disciplines (e.g. public health, landscape architecture, health geography and psychology), each providing valuable insights into the processes that may be occurring within such settings to promote well-being. These include cognitive, physical, social, emotional and spiritual mechanisms (e.g. Bowler, Buyung-Ali, Knight, & Pullin, 2010; Hartig et al., 2014; Warber, Irvine, Devine-Wright, & Gaston, 2013). Despite this research, we know relatively little about the specific well-being contribution of wildlife encounters within these settings, or the role of the individual in seeking out and appreciating such interactions in their day-to-day lives (Bell, Phoenix, Lovell, & Wheeler, 2014).

The desire to interact with plants and animals for well-being is apparent in the literature on: gardening (Gross & Lane, 2007; Milligan, Gatrell, & Bingley, 2004); companion animals (Walsh, 2009); nature-assisted therapy (Annerstedt & Währborg, 2011); and nature-based tourism experiences allowing wildlife enthusiasts to encounter rare species and 'charismatic megafauna' (Curtin, 2009, 2010; Hill, Curtin, & Gough, 2014). We complement and extend this research by exploring how interactions with

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wildlife in local natural environments enable people to maintain a sense of well-being during their *everyday* routines, an angle that has been largely overlooked in the literature to date. In the light of ongoing debates about how wildlife should best be conceptualised (e.g. Anderson, 1997; Urbanik, 2012; Whatmore & Thorne, 1998), we follow Lorimer's (2015, p. 11) assertion that wildlife is '*vernacular, everyday and democratic*'. We adopt a broad conception of wildlife as perceived by the individual, recognising that '*meanings of wildlife are socially constructed and related to place*' (Folmer, Haartsen, & Huigen, 2013, p. 132).

What do we know about wildlife, everyday well-being and green space?

Humans have relied on wildlife for thousands of years for provisioning, cultural and spiritual reasons, and diverse forms of wildlife interaction are still valued throughout the world (Anderson, 1997; Urbanik, 2012; Whatmore & Thorne, 1998). Despite this long-standing connection, there remains limited in-depth understanding of the ways in which everyday wildlife encounters might influence different human health and well-being outcomes (Curtin, 2009). A recent systematic review of the health and well-being benefits of biodiverse environments found that positive relationships with wildlife, in developed countries, were most apparent at '*a local scale, following immediate encounters or through presumed repeated exposures*' (Lovell, Wheeler, Higgins, Irvine, & Depledge, 2014, p. 13). However, the social and emotional meanings of specific wildlife encounters, be they one-off or cumulative over time, remain unclear.

Studies have touched on the value of 'simple', benign relationships with nature, bringing comfort to people who struggle to engage in human relationships. For example, drawing on 12 years' experience as a psychiatrist, Searles (1960) suggests that people look for stable environments and simple relationships in times of crisis; the simplest relations are thought to be those with inanimate objects (e.g. stones), the most complex include relationships with people and somewhere in the middle lie relations with plants and animals. Searles (1960, p. 87) notes that an individual may find in non-human encounters '*peace, stability, companionship at times when his interpersonal relationships are filled with anxiety and loneliness*'. This may explain why stressed individuals or those recovering from crisis have been seen to value solitude in nature (Ottosson, 2001; Ottosson & Grahn, 2008).

The desire simply to see wildlife is frequently cited as an important motivation for visiting diverse 'natural' environments in the UK (Swanwick, 2009). Park visitors in Sheffield reported greater psychological well-being in local spaces where they perceived higher levels of biodiversity based on species they could detect (even when perceptions did not align with actual species richness) (Dallimer et al., 2012; Fuller, Irvine, Devine-Wright, Warren, & Gaston, 2007). In a series of focus groups exploring meanings attributed to specific London parks, Burgess, Harrison, and Limb (1988) found that participants valued the 'commonplace', such as squirrels, birds and bluebells, suggesting a fondness for the familiar. Similarly, the importance of hearing and seeing local birds has been identified in several small-scale studies, including those exploring community gardening experiences (Milligan et al., 2004), attitudes to park spaces (Özgüner & Kendle, 2006) and community forest perceptions (Pinder, Kessel, Green, & Grundy, 2009).

Research has indicated a cultural underpinning to people's wildlife perceptions and experiences (Jacobs, 2012). For example, semi-structured interview participants in south-east England spoke fondly of the 'serenity' of bird song and the 'friendship' of a robin (Ratcliffe, Gatersleben, & Sowden, 2013). However, they also noted the irritation caused by 'squawky' bird sounds which were considered intrusive; magpies and crows were denoted as raucous and harsh, red kites as aggressive and owls as 'spooky'. Similarly, participants in a qualitative study examining perceptions of a local urban woodland in north-west England described magpies as '*almost sort of vermin like*' (Jorgensen, Hitchmough, & Dunnett, 2007, p. 283). Given the geographical bias of the green space and health evidence base towards high latitudes and Western societies (Keniger, Gaston, Irvine, & Fuller, 2013), the influence of long-standing cultural narratives on people's species perceptions is relatively unstudied and unknown; species deemed charismatic and meaningful within one culture may be unfamiliar or unremarkable to another.

Lorimer (2015) theorises three forms of non-human charisma: (a) *aesthetic* charisma refers to the visual appearance of a species encountered through the media (e.g. wildlife documentaries) or during 'spectacular' modes of eco-tourism; (b) *ecological* charisma concerns the material properties and detectability of an organism to the human eye (or via sensory 'prostheses', such as radio trackers); and (c) *corporeal* charisma includes the feelings engendered by meaningful proximal, multisensory encounters. Aesthetic and corporeal forms of charisma are thought to be closely entwined, each generating powerful emotional human responses. Importantly, Lorimer (2015, p. 40) argues that '*nonhuman charisma has cultures, histories and geographies*', which in some respects challenges the assertion that humans possess universal innate affiliations to wildlife (as proposed by Wilson's, 1984 Biophilia Hypothesis). In so doing, it supports the suggestion by Jacobs (2009) that emotional responses to wildlife are often culturally mediated or learned via personal experience. Responses include physiological reactions (e.g. increased heart beat), behavioural tendencies (e.g. approaching or retreating) and emotional experiences (individual interpretations of an encounter) (Jacobs, Vaske, & Roemer, 2012). In this article, we focus on the latter, the well-being experiences and feelings attributed to everyday wildlife encounters during people's routine natural environment interactions.

Methods

The findings presented in this article are drawn from a wider study seeking to understand the contribution of diverse natural environments to well-being and how this varies according to everyday routines, life circumstances and past place experiences. The study was conducted in two towns (each with populations of approximately 30 000 people) in Cornwall, south-west England, a county in which over 27% of the land is designated as an Area of Outstanding Natural Beauty, with approximately 2000 ha of nature reserves, 145 conservation areas and 37 registered parks and gardens of special historic Interest (Cornwall Council, 2012).

In order to meet these aims, an interpretive, mixed methods 'geo-narrative' approach was designed, as detailed by Bell, Phoenix, Lovell, and Wheeler (2015a). A purposive sample of 33 participants was recruited from the two study sites, following household delivery of study information sheets and screening questionnaires. In order to gain insights into the perceived well-being value of their local natural environments across a diversity of everyday situations, the full study sample aimed to capture variation in gender (20 female, 13 male), life circumstances and green/blue/built space engagement. Recruited individuals were aged between 25 and 85 years old; in full-, part-time employment and retired; with and without children; and with household annual income ranging from less than £20 000 to over £70 000. During recruitment, participants were asked how they interact with their 'local environment' for 'health and/or happiness'. Care was taken not to indicate a focus specifically on green or blue spaces at this stage so as to reduce the risk of solely recruiting green/blue space enthusiasts. Ethical approval for the study was sought and granted through the University of Exeter Medical School Research Ethics Committee (Approval Reference: Jan13/B/001).

Participants carried a GeneActiv accelerometer (measuring physical activity) and QStarz BT-Q1000XT Global Positioning System (GPS, measuring location) receiver for one week. The resulting data were used to produce a set of personalised activity maps showing where participants went each day of that week and how long they stayed in different places. Each participant's maps were then used as visual prompts to guide an in-depth geo-narrative interview exploring how and why they engage with different local environments to promote and maintain a sense of well-being, and how they felt this had changed over time. Open questioning techniques were used to explore place narratives offered by participants in more detail, including physical and social contexts of their place interactions, memorable experiences, associated meanings and emotions and any other places of personal importance (for positive or negative reasons) that were not depicted on their maps. Participants were only asked about the significance of wildlife encounters (for example, 'what does it mean to you to see wildlife in this way?') if they explicitly volunteered the terms 'wild' or 'wildlife' when referring to interactions with plants or non-human animals during their outdoor experiences, or if they described specific wild plants or unexpected,

non-domesticated animal encounters in those settings. In the latter case, the interpretation of these plants/animals as 'wildlife' should be seen as a co-construction between the researcher and participant.

This was followed by nine go-along interviews with a subset of participants, in places they deemed important, offering further insights into participants' lived experiences within these settings. During these mobile, emplaced interviews, participants 'walked and talked' the researcher through their place experiences. By asking questions and observing, the researcher could examine their practices and interpretations in situ (Carpiano, 2009). Interviewees were selected purposively to reflect a variety of life stages and social contexts, from interviews with a solo walker, swimmer and dog walker to days out with two couples, two families and a cross-generational indoor craft-based activity club.

Multiple phases of analysis were undertaken on the data collected (see Bell et al., 2015a for more details). Following the co-analysis of the geo-narrative maps with participants, the resulting verbatim interview transcripts were subject to in-depth narrative thematic analysis to situate participants' natural environment experiences in the context of both their everyday lives and the complexities (personal, social and environmental) of their life histories (Phoenix, Smith, & Sparkes, 2010). Patterns and themes recurring across accounts were identified to understand variations in well-being experiences according to: preferred environmental settings; personal identities and relationships; current life circumstances; and past experiences. Four overarching types of well-being experience emerged in the context of participants' routine natural environment encounters, described as social, immersive, symbolic and achievement oriented (as described and characterised during an earlier phase of the research—see Bell, Phoenix, Lovell, & Wheeler, 2015b). We adopt this framework here to examine the specific significance of their wildlife encounters within such settings.

Findings and discussion

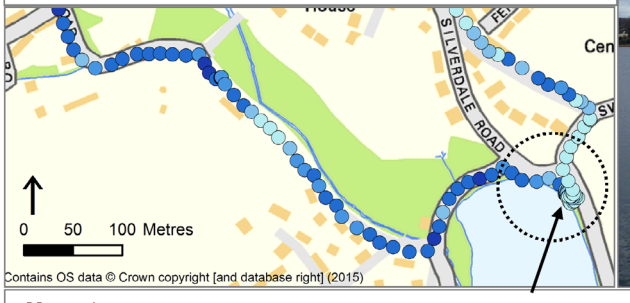
Several participants highlighted positive (often unexpected) 'wildlife' encounters when discussing natural environment interactions depicted in their geo-narrative maps and whilst reflecting on how their maps might have looked different over time (e.g. with seasonal shifts and earlier in the life course). They referred variously to hedgehogs, deer, foxes, badgers, skylarks, buzzards, general birdsong, dolphins, seals and diverse flowers, particularly in the context of the social, immersive and symbolic well-being experience dimensions noted above. The significance of these wildlife encounters is discussed further in this section, before examining who within the sample was valuing such encounters.

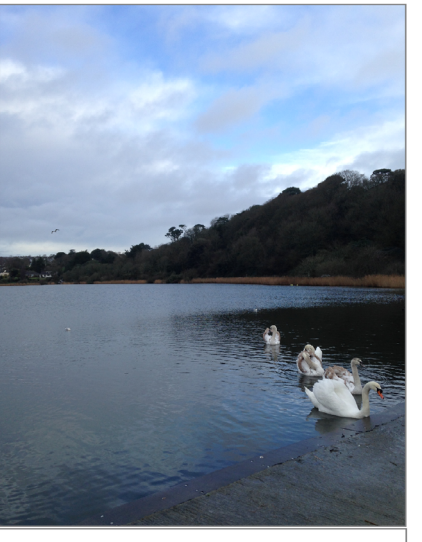
Most of these insights (and all of the illustrative quotes in this paper) were gained through the geo-narrative interviews; participants' descriptions of the outdoor experiences depicted on their maps often included reference to sightings of specific plants and animals deemed by participants to be 'wild' or 'free'. This provided opportunities to ask further open questions encouraging reflection on the meaning of such wildlife encounters, reminiscence about previous memorable wildlife encounters and discussions regarding other local settings where participants felt they were likely to encounter valued species. Although less frequent, three participants also volunteered stories during their go-along interviews when they became aware of particular forms of wildlife in their surroundings (e.g. butterflies, rabbits, swans and cygnets). As such, discussions in both sets of interviews were largely limited to the significance of 'charismatic' wildlife (ecological, aesthetic, and corporeal) rather than species more typically detected using dedicated equipment or requiring specialist knowledge.

The contribution of wildlife to valued social experiences

Some participants noted the value of shared wildlife encounters. For example, the narratives of participants with young children illustrated the contribution to family well-being of cultural practices such as feeding the ducks and looking out for cygnets. This is apparent in Meg's description of a visit to a local brackish lagoon and nature reserve, depicted in Figure 1, including both the interview extract and the cluster of light-coloured (i.e. low activity) GPS points located where Meg and her son paused to feed the ducks.

N.B. A dot is plotted every 10 seconds (provided the GPS could detect signal). The colour of the dot corresponds to the relative activity level detected by the accelerometer, whilst the location of the dot is determined by the associated GPS reading. Darker coloured dots indicate greater overall accelerations per 10s time period (i.e. participants were being more active). The greater the distance between the dots, the faster the GPS unit was travelling. This map of Meg and Henry's walk depicts just less than an hour of their day.





Meg: *(explaining how their use of the Swanpool nature reserve and lagoon has changed since having her two-year old son, Henry):* "We did much longer walks then, we would walk down to Swanpool to then go on the ((coastal)) path… so we would have walked past but without feeding the ducks. That we probably started with Henry - it feels a bit weird as a grown up unless you're an old granny ((laughs)) but we always have a look out to see if the cygnets are there or the baby ducks and we did that even before Henry, I always liked to see the baby ducks!"

Figure 1. Feeding the ducks at a local nature reserve.

Several participants explained how wildlife encounters catalysed opportunities for valued impromptu social interactions, in public spaces and 'threshold spaces'; semi-public spaces providing ready opportunities for conversation (Gardner, 2011). For example, in the extract below, Ron (aged > 80) explains the role of wildlife in catalysing intergenerational interaction within his front garden.

> Ron: (whilst describing the relaxation of bird watching in his garden): This morning a friend of ours came up the road with her grandchild. I was out throwing the sultanas for the birds and the little girl saw me and she waved. Back in January/February I gave her a snowdrop because she admired the snowdrops in the garden so I picked one and gave it to her, and she was quite pleased. So now she waves to me and her gran saw me so I said 'Good morning young ladies' and her gran said 'We're keeping a record of the birds, we've just seen a blackbird, you've got two up on your roof'.

This extract illustrates the contribution of wildlife to feelings of 'situated connectivity' (Ryan, 2012), which is often experienced in 'third spaces'; socially inclusive public settings offering individuals '*a nourished sense of self, companionship, a sense of purpose and a more positive outlook on life*' (Gardner, 2011, p. 267). Previous research has illustrated the tendency for gardeners to adjust both their landscape and habits to encourage birds to visit but rarely explores the wider intergenerational social benefits of such efforts (Urbanik, 2012).

The contribution of wildlife to feelings of immersion

Several participants appreciated the immersive qualities of specific local green and blue spaces, allowing them to 'switch off' or 'lose themselves'. Opportunities to connect with wildlife commonly featured within these immersive place narratives. For some participants, the presence of wildlife enhanced the 'restorative' properties of local natural settings. The process of 'attention restoration' has been widely researched by environmental psychologists in the context of green space exposures (Kaplan, 1995) but rarely in relation to specific wildlife interactions. It typically consists of two phases: an initial phase of recovery from cognitive fatigue and/or stress creates the mental space required for the second phase, involving deeper reflection on personal issues or goals (Herzog, Black, Fountaine, & Knotts, 1997).

Several participants alluded to the restorative influence of the sights, sounds and movements of wildlife in their local green spaces, which captured their attention and configured less hectic rhythms of activity than those routinely encountered at home or work. These rhythms promoted what Conradson (2007, p. 35) refers to as '*more restful psycho-social states*'. In the extract below, for example, Tara describes how being attentive (aurally and visually) to the gentle movement of the wildlife around her allotment calms her at the end of the day.

> Tara: (when asked why it's important to her to be outdoors): Sometimes I go down to my allotment and I finish pottering about and I can stand there for twenty minutes and just not do anything. Just listen to the birds, watch the cows walk backwards and forwards eating, you know, and not particularly do anything. Or I might see a fox or you know, the crows scaring off the kestrels and that. So your mind just wanders, it's just free really of clutter, and sometimes if I'm having like a stressful day, it helps not to have to think about it because you know that's going to distract you.

Participants also described how the unexpected nature of wildlife encounters encourages them to pause and appreciate those moments when they occur; as noted by Curtin (2009, p. 464), wildlife encounters afford rare opportunities to '*stand and stare … the quiet, calm and healing elements of stopping fast time and being absorbed in nature's slow time*'. In the geo-narrative extract below, for example, Derek (now in his 80s) recalls his and his wife's excitement upon seeing a pod of dolphins from the kitchen window whilst washing up.

> Derek: (reflecting on his previous home where he lived closer to the sea in Cornwall): One morning, my wife said 'Oh look!' and there was a pod of dolphins going along the shore so we leapt in the car, shot down to the front with a camera and so I've got a lovely few moments of 8 mm cine of the dolphins when they were off the Battery Rocks … It was, absolutely superb!

Several participants indicated the importance of maximising opportunities to incorporate these restorative encounters in the context of otherwise busy lives. For example, Helen spoke enthusiastically about the cycle path she used whilst commuting to work before moving to Cornwall:

> Helen: I used to, once or twice a week, cycle from home to work and again that was just wonderful … wild garlic, cowslips, cows, and it was all beside the dual carriageway. It wasn't a beautiful route at all but there's a really good cycle path completely divided from the traffic so you could get into your own world, and again I would arrive there and feel absolutely on top of everything.

Although the cycle path ran alongside a busy road, the physical separation from traffic and opportunity to engage with wildlife en-route to work made it an important part of Helen's working day.

The symbolic value of wildlife encounters

Several participants expressed feelings of freedom and a sense of perspective through consciously connecting with wildlife. For example, reflecting on the dog walks depicted on her maps, Mia explained that she prefers to walk her dogs along countryside or coastal trails rather than streets. She recounted her pleasure at seeing a pair of deer '*literally 50 yards*' away whilst walking her dogs in the week prior to the interview. When asked why those types of wildlife encounters were important to her, she drew parallels between the experiences of wildlife and her own sense of freedom in such spaces:

> Mia: I suppose it's because it's free isn't it ((pause)) … not free to look at, but as in either running free or flying free or … you're not gonna get it in London or a city. I think it's just 'cos it's natural. I mean those deer, they were huge, and like you know, sometimes you see little baby deer, but these were obviously a pair and like the stag had his antlers and all the rest of it. It's just nice to know that there is wildlife out there, running wild, it's not all cooped up or whatever.

Other participants explained how appreciating the simple pleasures of wildlife, such as a bird peering through the hedge and a new flower opening up, had provided a sense of comfort and perspective during periods of depression in the past. This was evident in Yvette's interview when reflecting on her coping strategies during a period of personal and financial instability:

> Yvette: When I first moved here actually, I did have quite a period of depression … and just sort of looking and, 'Oh there's a new flower come out' or whatever, that would sort of lift my spirits and make me feel better.

Consistent with the literature discussed above, participants noted the relative ease of wildlife interactions, particularly when compared to more stressful human encounters. For example, when Meg was explaining her preference for greener areas over built spaces, she commented, '*I'd rather hear the birds sing, I'd rather watch a bug crawl along than seeing people arguing over a burger or whatever in the town centre somewhere*'.

Three participants noted the importance of observing and connecting to life cycles, including the emergence of baby birds, and seeing trees and flowers coming into bloom. For example, one participant, Grace, made a special effort to seek out the wild snowdrops emerging in February, which she valued as a sign of spring. In the extract from her first interview below, she draws parallels between changes in her own life and the cyclical changes occurring in nature, which she feels has helped her deal with difficult emotions in the past.

> Grace: (explaining why the seasons are important to her): There are many, many ups and downs in life … when you think everything is impossible and you just grit your teeth and hang on, and that happens to all of us ((pauses)) … um and I've always thought of the seasons of the year and that if it wasn't for winter and darkness and cold, um and the seeds in the ground, there wouldn't be spring ((looking out the window)) and I think the way we feel can be rather like that … Somehow, you grow, roots grow in the winter … to think that way has helped me hang on in difficult times.

Another participant, Tara, explained that the seasonal cycles made her feel part of something dynamic and 'alive' rather than static and unchanging; '*to see that fluidity, I think, for things not to be static, to see that things do change … when you're in a city to be fair, the only way you know that the season's changed is what's in a shop window!*' Connecting to such cycles (perceived as 'something bigger' than the minutiae of day-to-day life) seemed to bring a sense of perspective for these participants.

The contribution of wildlife to feelings of achievement

Several participants emphasised the importance of green/blue space activities conferring a sense of personal agency and achievement. One such activity featured wildlife in the context of sea and freshwater fishing. For example, one participant (Owen) shared stories of fish he had 'battled with' and caught since he first started fishing at the age of three.

> Owen: My dad never gets to go fishing with me and recently I took him barbel fishing—he wasn't fishing, he took photos, he loves photography—and we went up to a place which we'd heard really good things about. I was fishing all day, didn't catch anything. Then just as we were about to leave, I leaned in to pick my rod up to reel it in and the rod just bent double and I'd struck into a barbel! First barbel I'd ever caught, eleven and a half pound—that's about that long, about that thick, huuuge fish! I mean it's huge and they are just sleek, absolute power houses! They're so hard to fight and it was brilliant! I had it on for about half an hour, it was ridiculous! I was so scared to lose it—I could have probably got it in half that time but it was a really great fight. I mean I was in the river up to my knees and trying to keep it on, it was crazy! But it was great because my dad was there so I've got loads of photos of it and normally I wouldn't have had that.

In this story, Owen's sense of achievement was enhanced through the unexpected nature of the catch, the level of challenge encountered and the presence of his father who captured a photographic record of the moment. Had this study been conducted with wildlife specialists or wildlife tourists, we might perhaps have observed broader non-consumptive achievement-oriented experiences linked to wildlife spotting, tracking and species identification (e.g. Curtin, 2010).

Who is appreciating wildlife in this way?

Only a subset of the participants in this study specifically alluded to the importance of wildlife encounters in their routine green space interactions, with other participants emphasising alternative benefits of such spaces (including the openness and power of nature, the elements and opportunities for social and physical activities).

Consistent with existing literature (Burgess et al., 1988; Ward Thompson, Aspinall, & Montarzino, 2008), many participants attributed their wildlife appreciation to childhood interactions with nature.

This is illustrated in Grace's comment below, in which she touches on the difficulty of growing up during the Second World War and recalls the comfort and peace provided by the coppice woodland and fields behind her house at the time. The wildlife in these areas offered Grace a less demanding source of companionship than her human relationships during that period.

> Grace: (when asked about important spaces in the home for well-being): I suppose being out here near nature and the garden. Just the general quietness really … As a child I escaped into nature. I'd escape from home and go and lay in a field or up a tree. We had a big hill just behind our house. It was all part of the garden but nobody ever went up there, and it led onto a sort of coppice and hedge with trees, and I used to go there from a very early age and just lay on the ground. I don't know what I did, I just was at one with it, and the grasshoppers would jump all over me and I just felt peaceful, mmm, nobody could get at me. I couldn't hear anybody calling me and that was great. I think I spent most days doing that. I mean this was during the war and life was a little bit difficult anyway.

Other participants, however, came to appreciate the relaxing influence of nature (including specific wildlife interactions) later in life, such as Sally who moved to the study area for a significant lifestyle change after 31 years of living in Central London. Whilst she had sought little nature interaction during the intensity of London life, she explained how she had come to appreciate opportunities for peace and quiet in her local woodland environments since moving:

> Sally: I feel close to nature … you gotta respect nature, nature provides these quiet areas … and engaging with nature, I didn't get it in London … I respect it for what it gives me now, which is peace and time to walk through it and look at it and enjoy it … you hear the birds singing … squirrels running up a tree.This reflects Lorimer's (2015, p. 51) description of an 'epiphany moment'; a transformative experience involving a salient wildlife encounter (or a series of meaningful interactions) that '*inscribe a memory and plant a seed that becomes a lifetime attachment*'.

Participants' narratives in this study suggest such moments may be positive or negative, leading to varied emotional responses. For example, although Sally discussed her enjoyment of woodland and coastal walks, she did not feel comfortable amongst aquatic wildlife, which she in part attributed to the cultural influence of the 1975 thriller film, Jaws.

> Sally: (when asked if she goes sea swimming after seeing a visit to the local swimming pool on her maps) No, it's that Jaws film ((laughs)). When I was little, that did it for me! ((laughs)) … I used to go coasteering with my colleagues … and we were over at Newquay … coasteering, and then all of a sudden a grey seal popped its head up and oh my god, I shit myself ((laughs)) I was up those rocks like a rat, like a rat!

Sally's reaction to her seal encounter illustrates the need to consider the influence of actual and virtual past place experiences when exploring how and why people engage with wildlife for well-being. For Sally, these experiences included the accumulation of fatigue whilst living the hectic London lifestyle (an *actual* place experience enhancing her subsequent enjoyment of the peace and space afforded by land-based nature), and the lasting personal impact of watching a film as a child (a *virtual* place experience compromising her appreciation of aquatic wildlife). The latter links to previous studies highlighting the role of myth and media sensationalism in creating concerns about what may 'lurk' in forest settings (Burgess et al., 1988; Skår, 2010).

Whilst wildlife awareness and connections to nature may be forged during childhood (Ward Thompson et al., 2008), the findings of the current study suggest they can also develop later in life, depending on personal circumstances and well-being priorities. This was illustrated above in the context of Sally's decision to move to Cornwall, and the associated shift in her preferences towards the slower pace and peace afforded by more natural spaces, something she craved after 31 years of exposure to the opposite in London. Similarly, it was only when Yvette experienced depression that she fully appreciated the simple pleasures around her, many of which were linked to wildlife. As such, particular life decisions and transitions may open up new opportunities or motivations to connect to nature, with or without the memories of positive childhood experiences.

Implications for environmental design and management

The narratives shared by participants in this study suggest that efforts are needed to facilitate interdisciplinary working amongst health and green space professionals (and between research,

policy and practice). Recognition of mutual environmental and well-being benefits could enable informed investment in green space design and management approaches that create socially inclusive opportunities for diverse well-being experiences whilst also promoting the ecological value of such spaces. This is particularly important in the face of ongoing challenges posed by climate change and ever-tightening public service budgets (Neal, 2013). The study findings support recent calls for design to '*achieve a balance between functionality, durability and delight*' (Landscape Institute, 2013, p. 2). Speaking particularly to the latter, participants' narratives suggest value in encouraging:

- *Achievement-oriented wildlife encounters:* finding a balance between activities that promote a sense of personal achievement in nature without compromising the survival of the wildlife that is supportive of such experiences. Activities could include wildlife walks, responsible wild food foraging, green space conservation programmes and sustainable fishing facilities.
- *Social wildlife encounters:* creating a range of inclusive environments supporting intergenerational/broad spectrum ability engagement, and enabling people to linger and share in friendly, mutually comfortable interactions in nature (e.g. incorporating small, naturalistic shelters or appropriately located café/picnicking sites where people can gather and engage in conversation). Recognising the aversion to human presence of more 'flighty' species, these 'social' areas could be located in less ecologically sensitive areas, and interspersed with quieter, reflective zones, allowing for tranquil (shared) immersion in the setting and the wildlife therein.
- *Immersive wildlife encounters:* developing a 'green spine' within (and between smaller) urban areas that connects green spaces, river valleys and waterways with pedestrian and cycle routes. The Landscape Institute (2013) has lauded the potential ecological and sustainable transport benefits of this green spine. However, the findings presented here suggest that nuanced, sensitive approaches to its design could also provide opportunities to incorporate restorative multisensory wildlife encounters within the daily commute and otherwise busy lives. Efforts could be made to design and manage green spaces for the senses, for example through tactile planting or via the inclusion of acoustic gardens and seasonal scented trails. Careful choreography of such spaces would be needed to ensure spatial separation of potentially conflicting sensory experiences (Peters, Elands, & Buijs, 2010).
- *Symbolic wildlife encounters:* planting visible 'cues' to the seasonal cycles of nature (e.g. fruit trees, spring flowers and trees displaying rich autumn colours), nurturing feelings of connection to nature's life cycles and opportunities to transcend everyday concerns. Steps could also be taken to include reserves of native planting that are proportionately more affordant of wildlife, and to promote low-impact wildlife engagement (e.g. bird hides, screening). This would provide opportunities for symbolic associations of freedom and simplicity, such as those discussed by participants in this study.

When considering these opportunities, however, it is important to recognise the gaps outstanding in our understanding of who values and engages with wildlife and why; as noted by Lorimer (2015, p. 181), different people '*learn to be affected by wildlife through a multitude of multispecies entanglements*'. The participants in this study who prioritised wildlife encounters included: those reaching a stage in their life where they had come to appreciate the relaxation, peace and quiet provided by nature and wildlife; those with young children who enjoyed watching wildlife; those who found comfort in the simple pleasures provided by wildlife during periods of depression or stress; and those indicating long-established connections to nature since childhood.

We still know relatively little about why, when and how people from different backgrounds forge connections to green spaces (or the wildlife within), or how this influences the personal salience of such spaces for different dimensions of well-being (Bell et al., 2014). Importantly, this may vary in different cultural and geographical contexts; would individuals in lower geographical latitudes, characterised by a greater prevalence of 'risky' species, still perceive opportunities for 'simple' or comforting relationships with wildlife in their local natural environments? Sally's reference to the perceived risk of sharks in

the local area and her fear of aquatic wildlife reflect how perceived risk may counter opportunities for relaxation and restoration in these spaces. Alternatively, long-term habituation processes may counter such risk perceptions. Future studies could explore these processes further, combining in-depth approaches, such as those used in this study, with larger-scale cross-cultural surveys to help understand the wider salience of the findings.

Conclusions

This paper has explored the ways in which immediate encounters with wildlife during people's routine green and blue space interactions may promote personal experiences of well-being. It drew on the findings of a three-stage mixed method study that sought to understand and situate people's well-being-related natural environment interactions within their everyday lives. Although based on a small self-selected sample, the study offers new and diverse insights into how different types of wildlife encounters can contribute to the well-being potential of such settings.

Wildlife encounters were analysed in the context of four types of well-being experience: social (engaging in cultural practices as a family, couple or as friends, such as feeding the ducks); immersive ('losing oneself' in the gentle sights, sounds and activities of wildlife); symbolic (gaining a sense of perspective, freedom and/or comfort through appreciating the simplicity and cyclical nature of wildlife); and achievement oriented (e.g. catching a large fish). These experiences represent different ways of connecting to nature, and reflect elements of two widely recognised conceptions of well-being: experiences of pleasure and enjoyment ('hedonia') and feelings of positive relatedness, purpose and meaning ('eudaimonia') (Reid & Hunter, 2011).

The findings of this study suggest value in exploring how childhood experience, as well as later life decisions and transitions, may establish opportunities (so-called 'epiphany moments') or motivations to connect with wildlife, and how this influences the perceived well-being potential of different types of green/blue space experiences in the local environment. For example, to what extent could collaborative, targeted action by green space and health professionals, perhaps using approaches suggested above, broaden opportunities for people to experience a positive sense of well-being through everyday wildlife encounters? In so doing, care should be taken to balance people's desire for culturally significant charismatic species encounters with the need to protect less charismatic but nonetheless ecologically important species.

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